

5. (Amended) A host cell according to Claim 4, wherein the host cell is a pro- or eukaryotic cell.

6. (Amended) A host cell according to Claim 5, wherein the prokaryotic cell is *E. coli*.

7. (Amended) A host cell according to Claim 5, wherein the eukaryotic cell is a yeast cell, mammalian cell, insect cell or plant cell.

8. (Amended) A transgenic organism, with the exception of humans, containing a nucleic acid according to Claim 1.

9. (Amended) An isolated polypeptide which is encoded by a nucleic acid according to Claim 1.

10. (Amended) A receptor comprising an EcR subunit and a polypeptide according to Claim 9.

11. (Amended) An antibody which binds specifically to a polypeptide according to Claim 9.

12. (Amended) A process for the preparation of a polypeptide which is encoded by a nucleic acid according to Claim 1, comprising the steps of:

- culturing a host cell comprising a nucleic acid according to Claim 1 under conditions which ensure the expression of the nucleic acid according to Claim 1, and
- obtaining the polypeptide from the cells or the culture medium.

13. (Amended) A process for the preparation of a nucleic acid according to Claim 1, comprising the steps of:

- chemically synthesizing the complete nucleic acid,
- chemically synthesizing oligonucleotides, labelling the oligonucleotides, hybridizing the oligonucleotides with DNA of an

insect cDNA library, selecting positive clones and isolating the hybridizing DNA from positive clones, or

(c) chemically synthesizing oligonucleotides and amplification of the target DNA by means of PCR.

14. (Amended) A regulatory region which naturally controls the transcription of a nucleic acid according to Claim 1 in insect cells and which ensures specific expression.

15. (Amended) A method of finding new active compounds for crop protection, in particular compounds which cause the activation or inhibition of a polypeptide which is encoded by a nucleic acid according to Claim 1, comprising the steps of:

(a) providing a host cell comprising a nucleic acid according to Claim 1,

(b) culturing the host cell in the presence of a chemical or a mixture of chemicals, and

(c) detecting the activation or inhibition of the polypeptide or receptor.

16. (Amended) A method of finding a compound which binds to a polypeptide according to Claim 9, comprising the steps of:

(a) contacting a polypeptide according to Claim 9 with a compound or a mixture of compounds under conditions which permit the interaction of the compound or mixture of compounds with the polypeptide, and

(b) identifying the compound which binds specifically to the polypeptide.

17. (Amended) A method for inducibly expressing target genes with a polypeptide which is encoded by a nucleic acid according to Claim 1 comprising the steps of:

(a) culturing a host cell comprising a nucleic acid according to Claim 1 under conditions which ensure the expression of the nucleic acid according to Claim 1, where the host cell comprises a target gene with suitable regulatory sequences, and

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(b) contacting the host cell with a chemical which induces the expression of the target gene.

Please add the following claims:

20. A host cell comprising a vector according to Claim 2.

21. A host cell comprising a vector according to Claim 3.

22. A transgenic organism, with the exception of humans, containing a vector according to Claim 2.

23. A transgenic organism, with the exception of humans, containing a vector according to Claim 3.

24. A method of finding new active compounds for crop protection, in particular compounds which cause the activation or inhibition of a receptor comprising an EcR subunit and a polypeptide which is encoded by a nucleic acid according to Claim 1 comprising the steps of:

- (a) providing a host cell comprising a nucleic acid according to Claim 1,
- (b) culturing the host cell in the presence of a chemical or a mixture of chemicals, and
- (c) detecting the activation or inhibition of the polypeptide or receptor.

25. A method for inducibly expressing target genes with a polypeptide which is encoded by a nucleic acid according to Claim 1 comprising the steps of:

- (a) providing a transgenic organism other than a human, comprising a target gene with regulatory sequences and a nucleic acid according to Claim 1, and
- (b) contacting the transgenic organism with a chemical which induces the expression of the target gene.

26. A method according to Claim 25, wherein the transgenic organism comprises a vector comprising a nucleic acid encoding a polypeptide with the bioactivity of the ultraspiracle protein, comprising a sequence selected from

- (a) the sequence of SEQ ID NO: 1,
- (b) sequences which have at least 85% identity with the sequence of SEQ ID NO: 1 over a length of at least 600 consecutive nucleotides,
- (c) sequences which, owing to the degeneracy of the genetic code, encode the same amino acid sequence as the sequences defined under (a) and (b), and
- (d) parts of the sequences as defined under (a), (b) and (c) which encode polypeptides which have essentially the same bioactivity as a polypeptide with the amino acid sequence of SEQ ID NO: 2.

27. An isolated nucleic acid encoding a polypeptide with the bioactivity of the ultraspiracle protein, comprising the sequence of SEQ ID NO: 1.

28. A isolated polypeptide which is encoded by a nucleic acid according to
Claim 27.--